

Figure 1. Intercalated Natural graphite Flakes

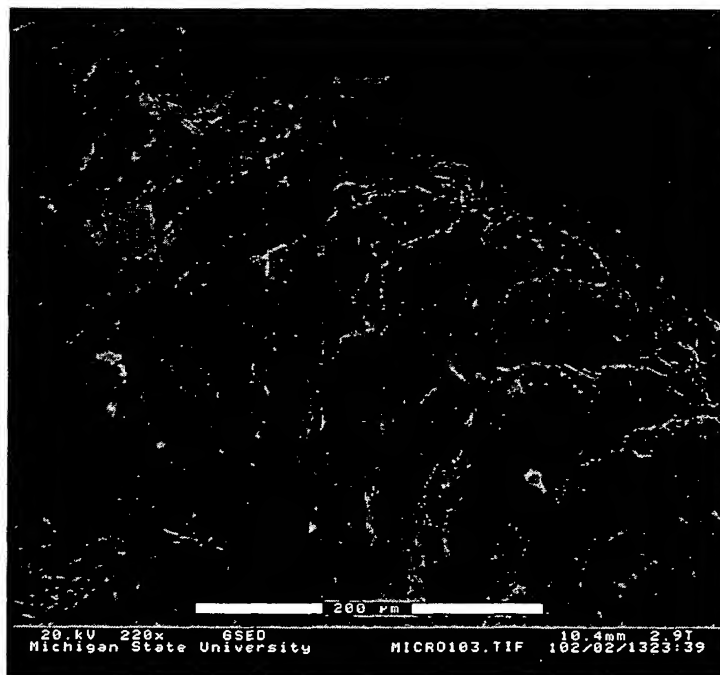


Figure 2. Expanded Natural graphite Flakes by Microwave

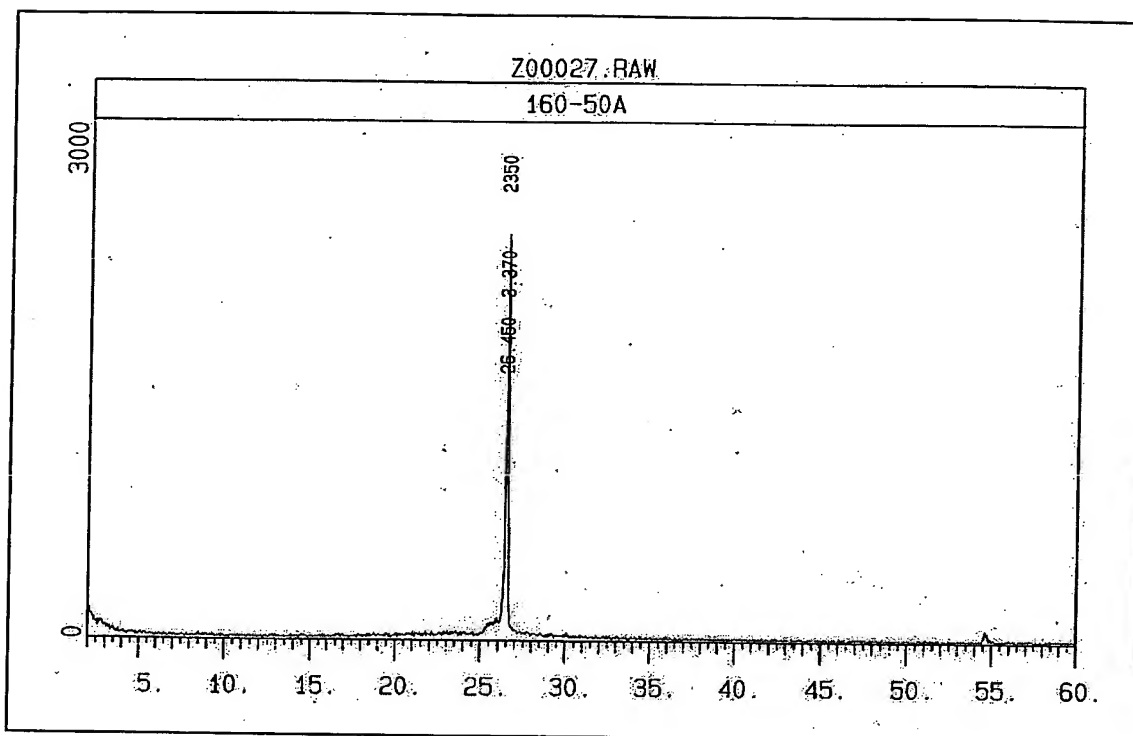


Figure 3. X-Ray Diffraction Pattern of Intercalated Natural Graphite

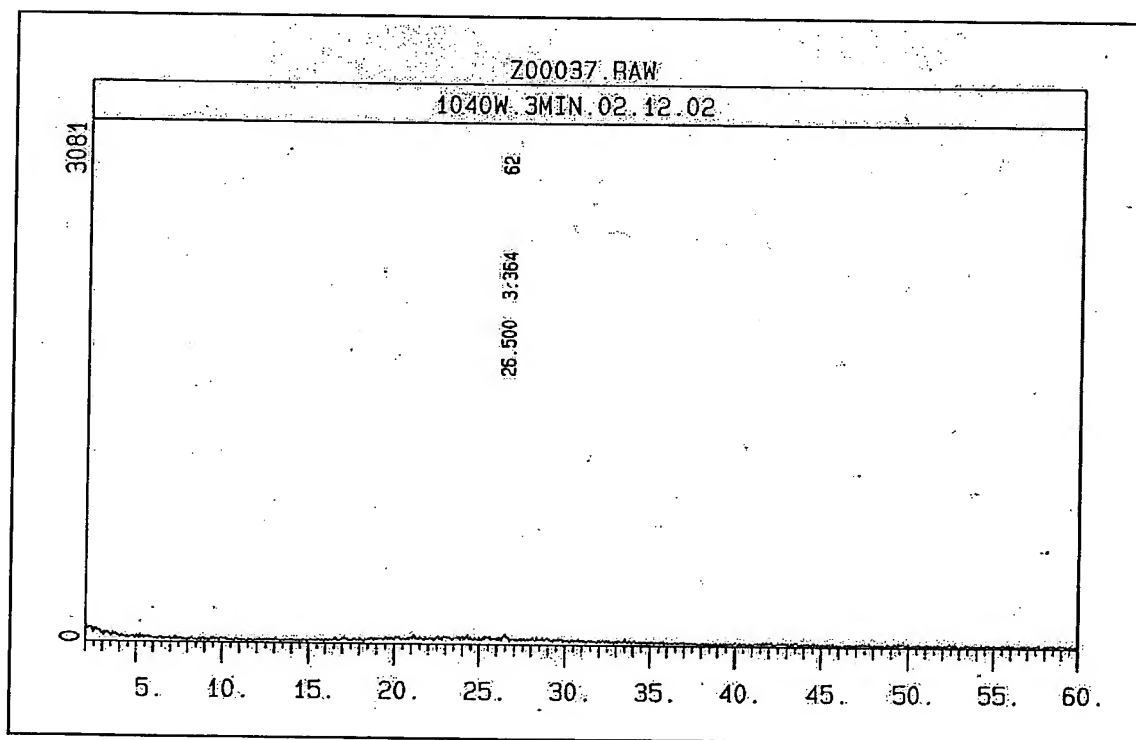


Figure 4. X-Ray Diffraction Pattern of Intercalated Natural Graphite

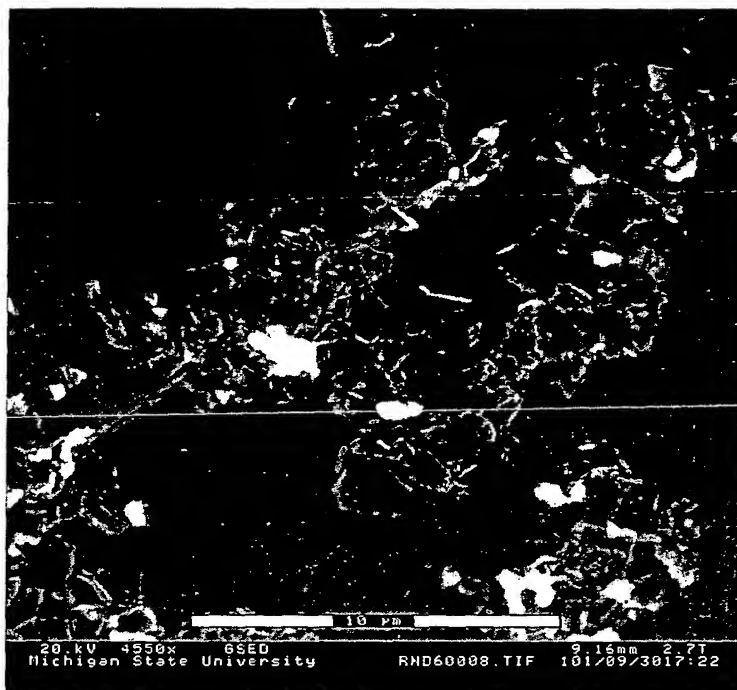


Figure 5. Exfoliated Graphite Platelets

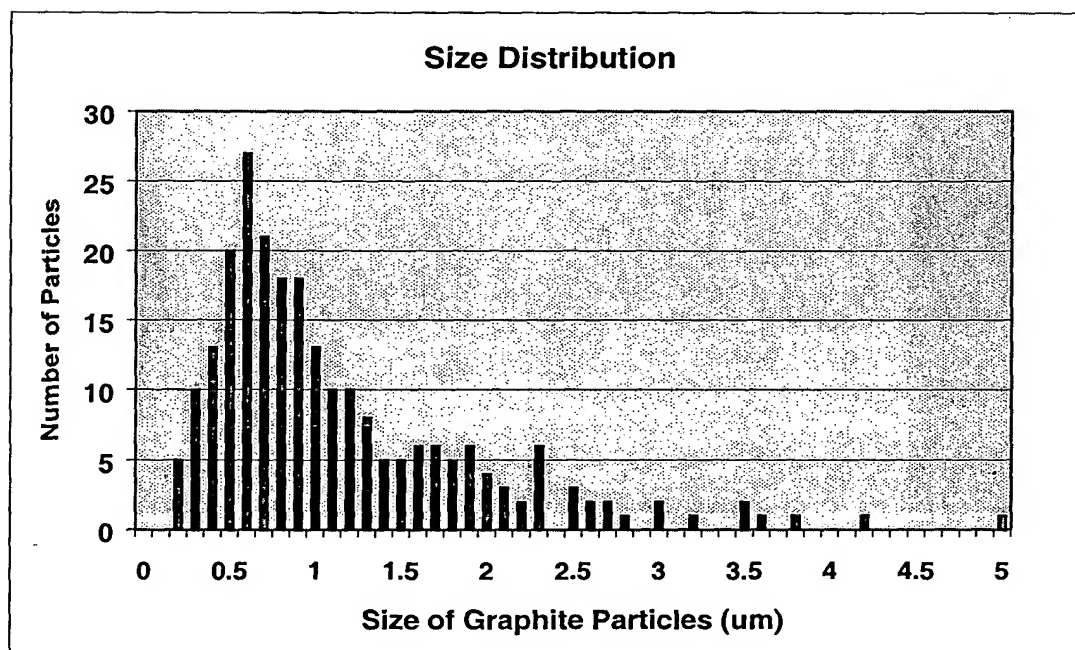


Figure 6. Size Distribution of Exfoliated Graphite Platelets

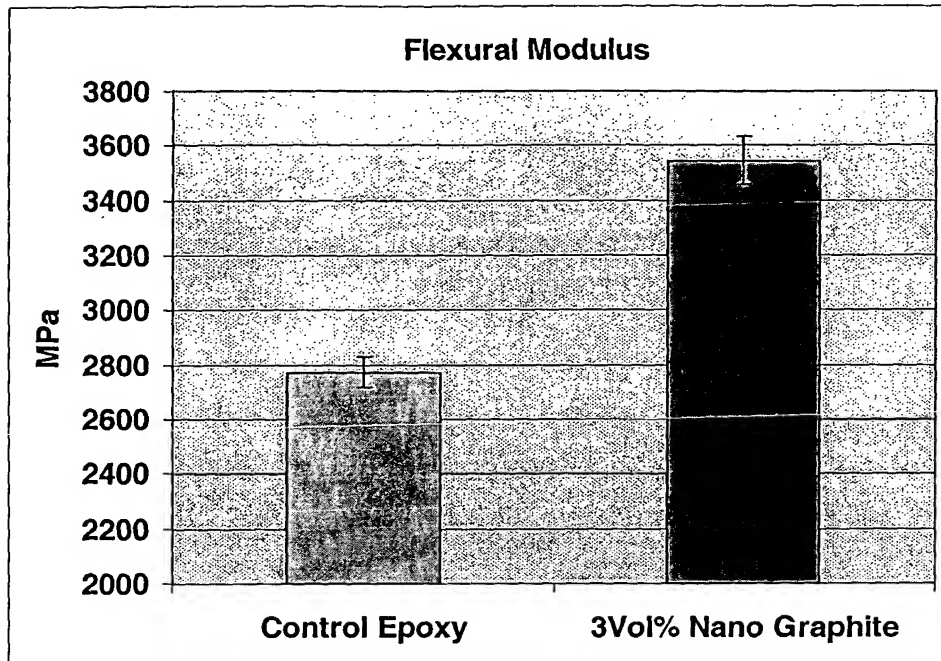


Figure 7. Flexural Modulus of Control Epoxy and Graphite Nanoplatelets reinforced Composite

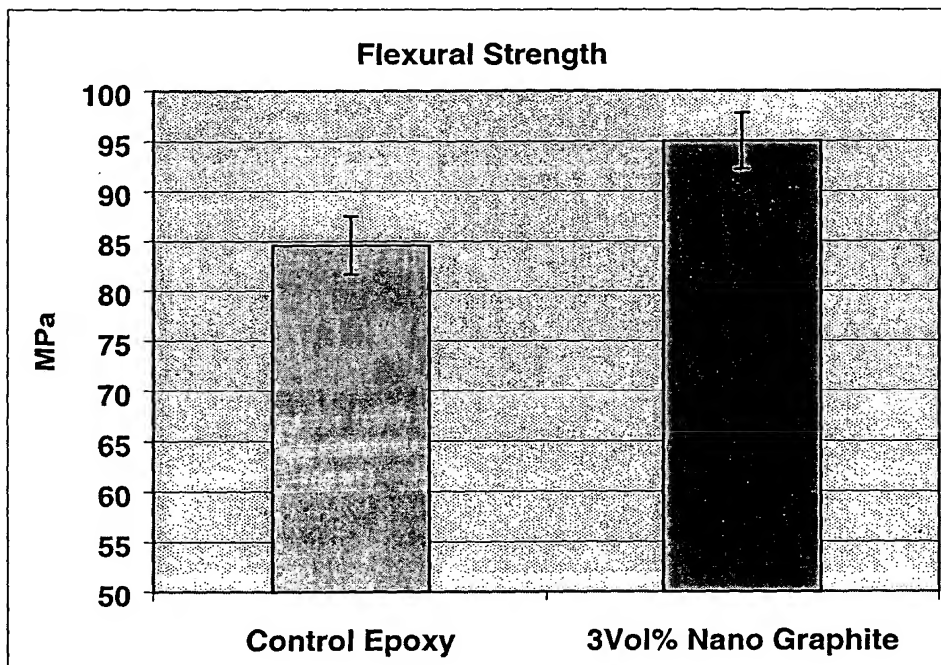


Figure 8. Flexural Strength of Control Epoxy and Graphite Nanoplatelets reinforced Composite

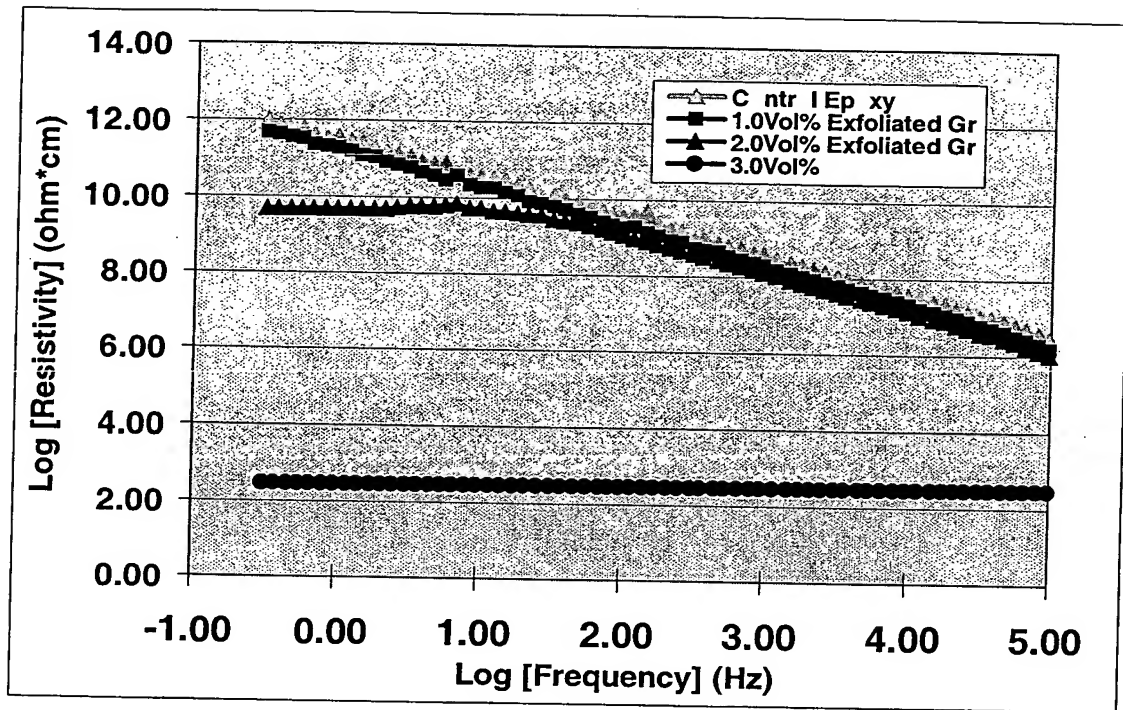


Figure 9. Resistivity of Control Epoxy and Graphite Nanoplatelets reinforced Composites

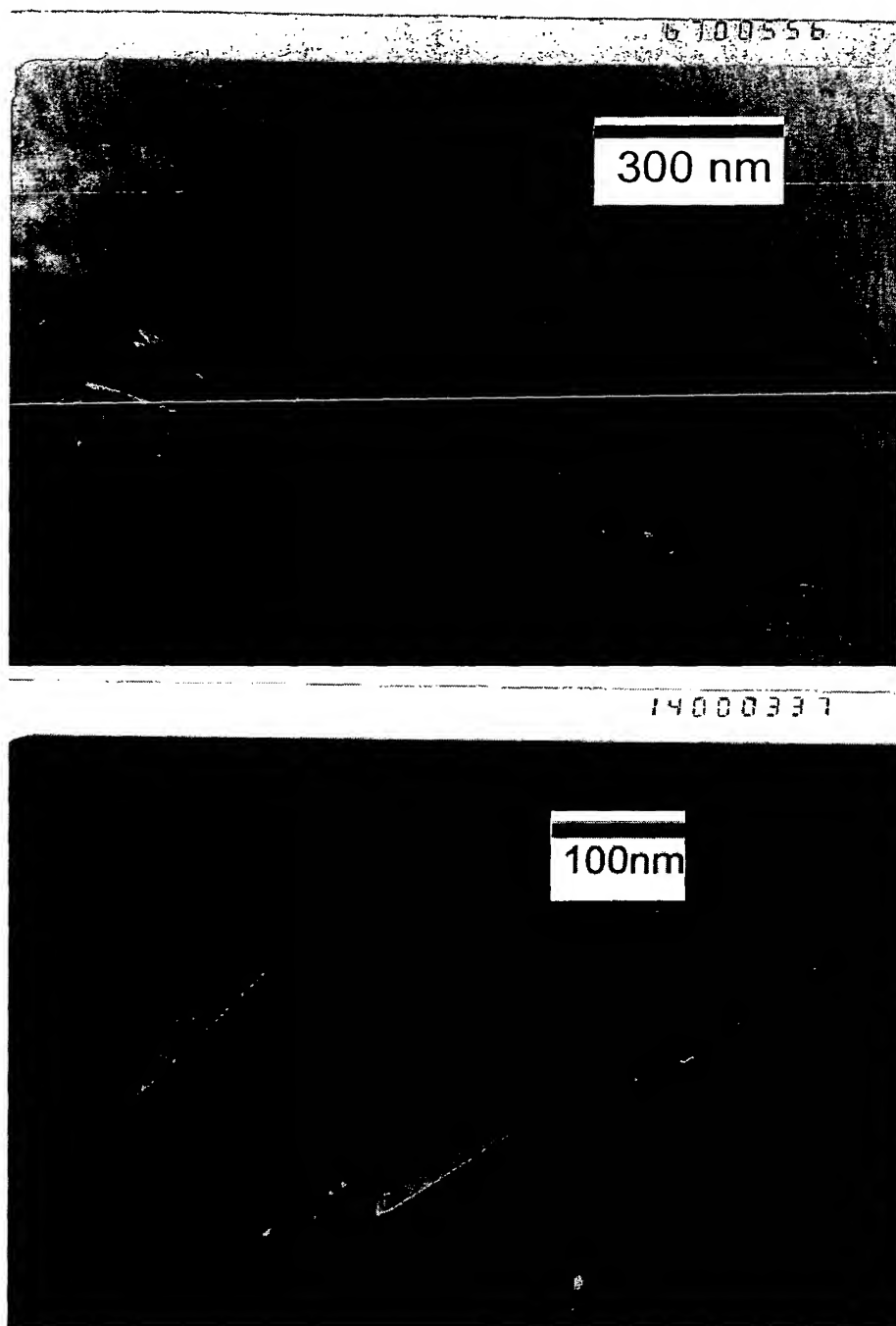


Figure 10. TEM Images of Graphite Nanoplatelets in Polymer Matrix

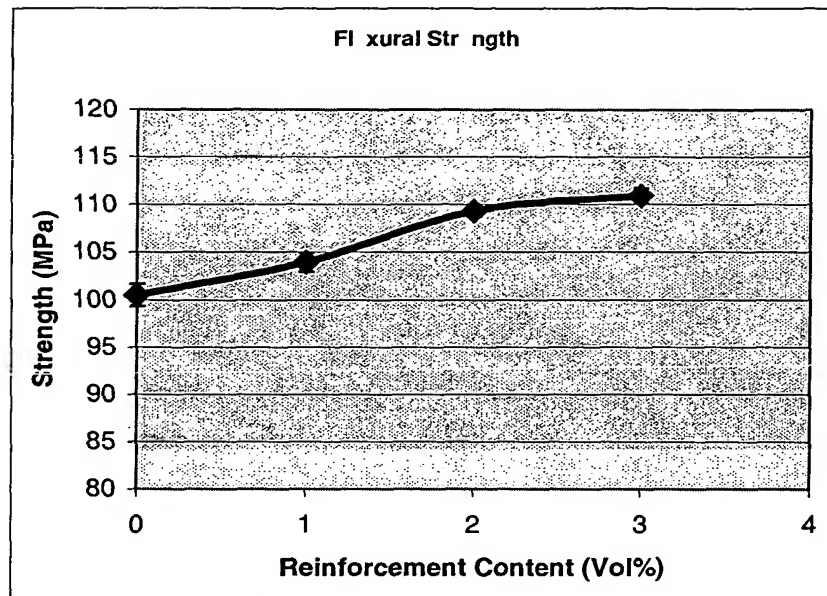


FIGURE 11

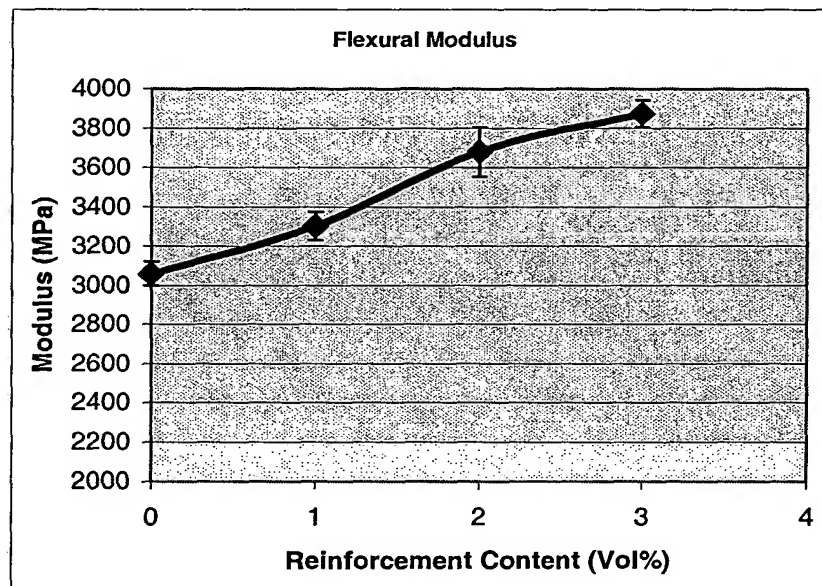


FIGURE 12

(a) Effect of Acrylamide Grafting

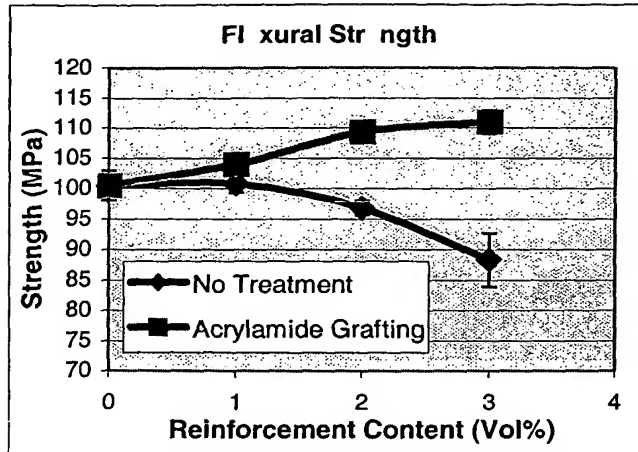


FIGURE 13

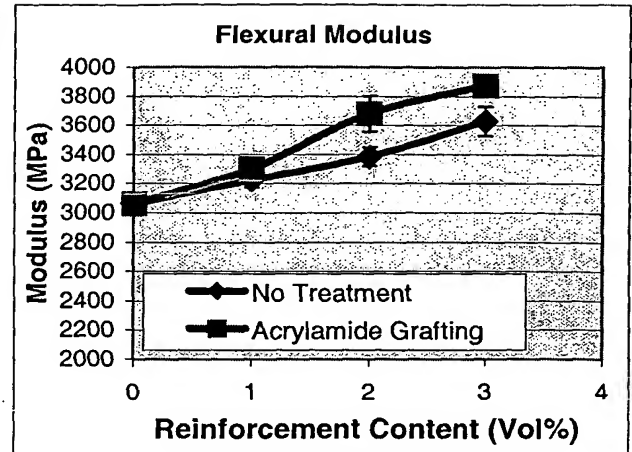


FIGURE 14

(b) Effect of Exfoliation Method and Milling

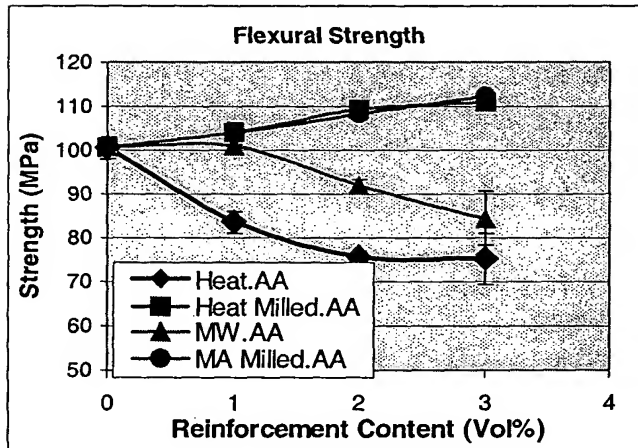


FIGURE 15

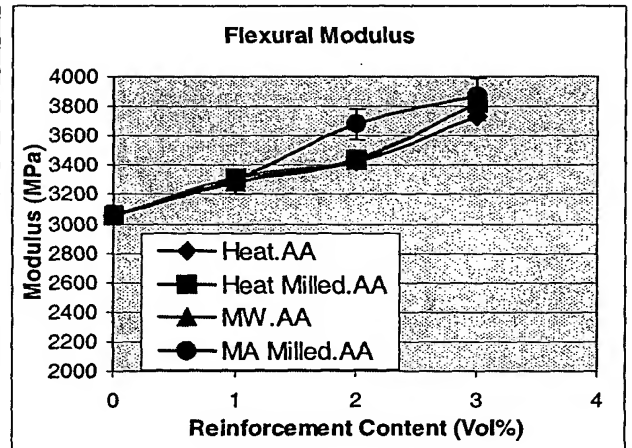


FIGURE 16

(c) Comparison to Other Carbon Materials

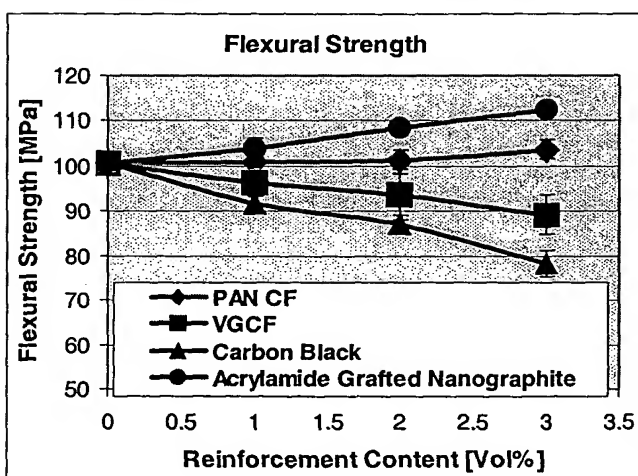


FIGURE 17

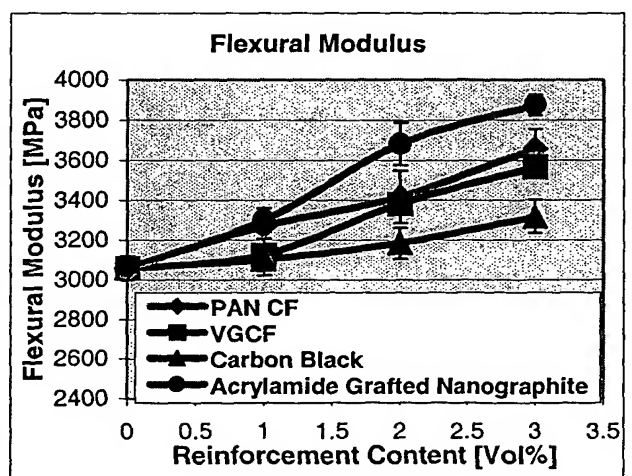
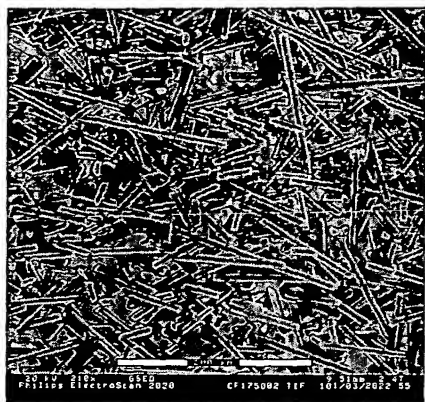
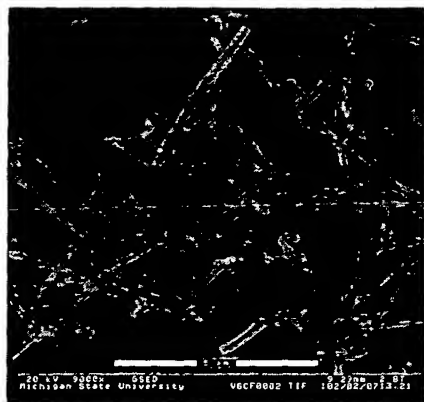


FIGURE 18



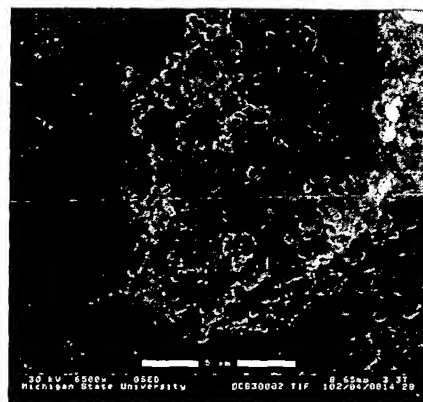
A: PAN based Carbon Fiber
(Scale Bar = 200μm)

FIGURE 19



B: VGCF
(Scale Bar = 5μm)

FIGURE 20



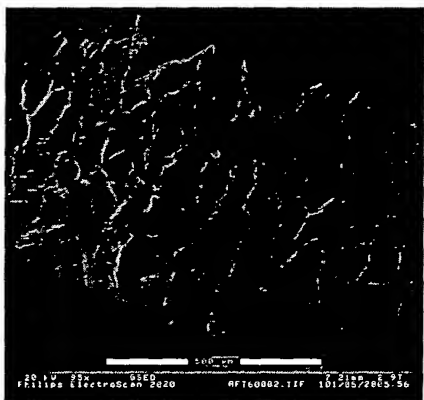
C: Carbon Black
(Scale Bar = 5μm)

FIGURE 21



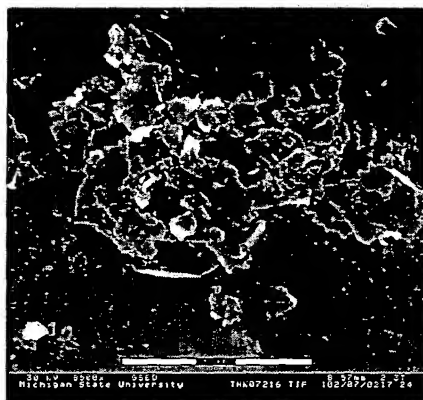
A: As-received Graphite
(Scale Bar=300 μm)

FIGURE 22



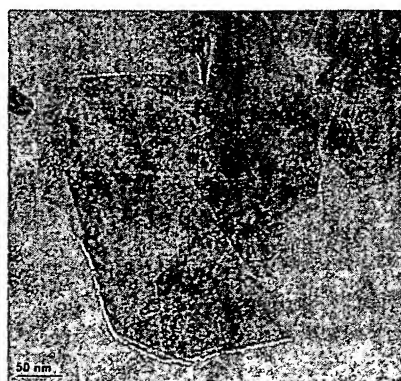
B: Expanded Graphite
(Scale Bar=500 μm)

FIGURE 23



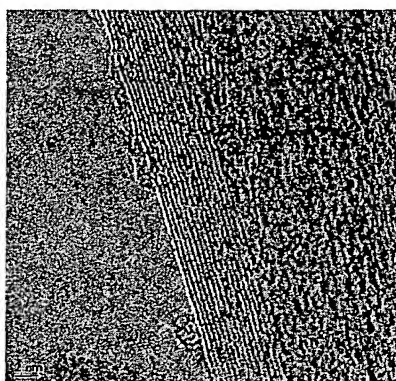
C: Pulverized Graphite
(Scale Bar=5 μm)

FIGURE 24



A: Scale Bar=50 nm

FIGURE 25



B: Scale Bar=2 nm

FIGURE 26

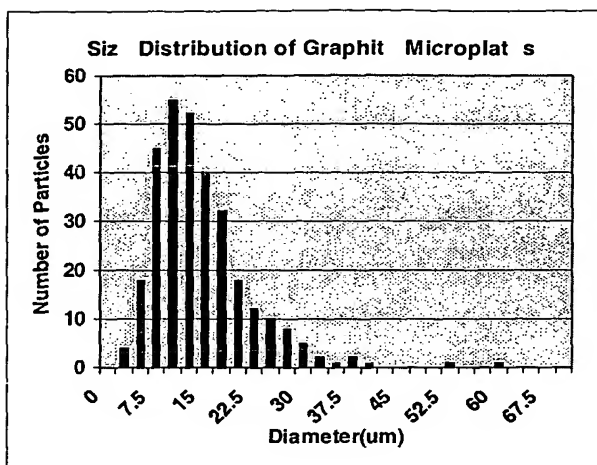


FIGURE 27

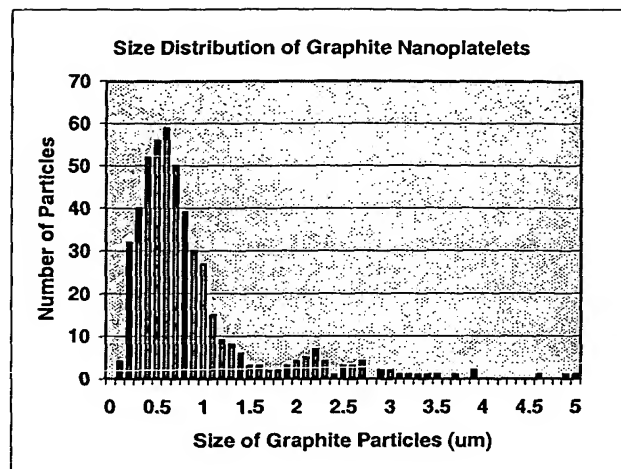


FIGURE 28

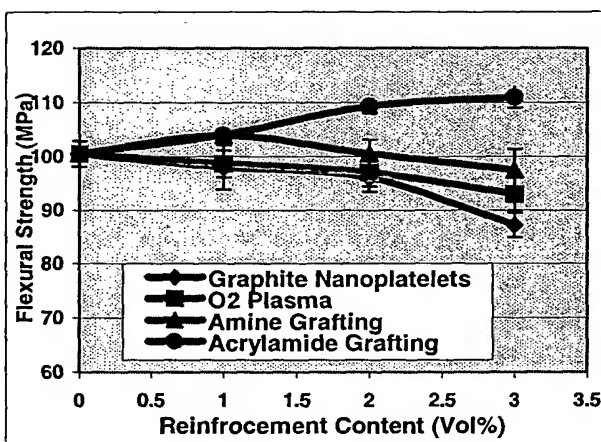


FIGURE 29

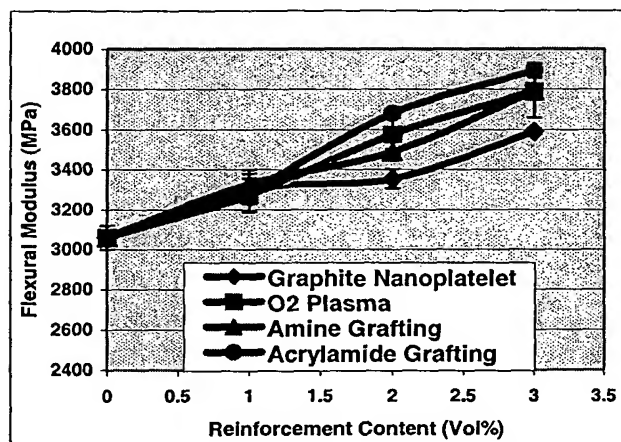


FIGURE 30

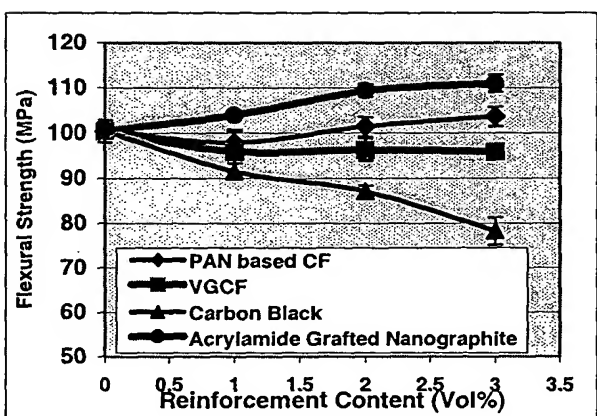


FIGURE 31

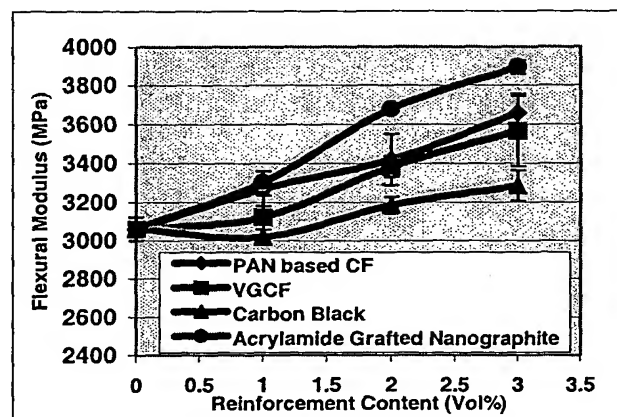


FIGURE 32

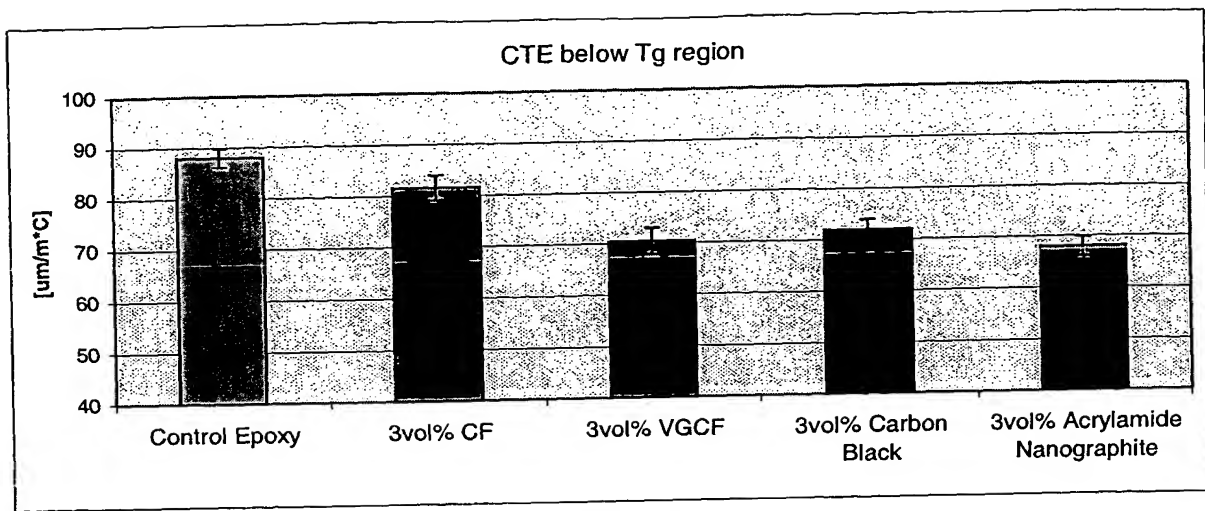


FIGURE 33

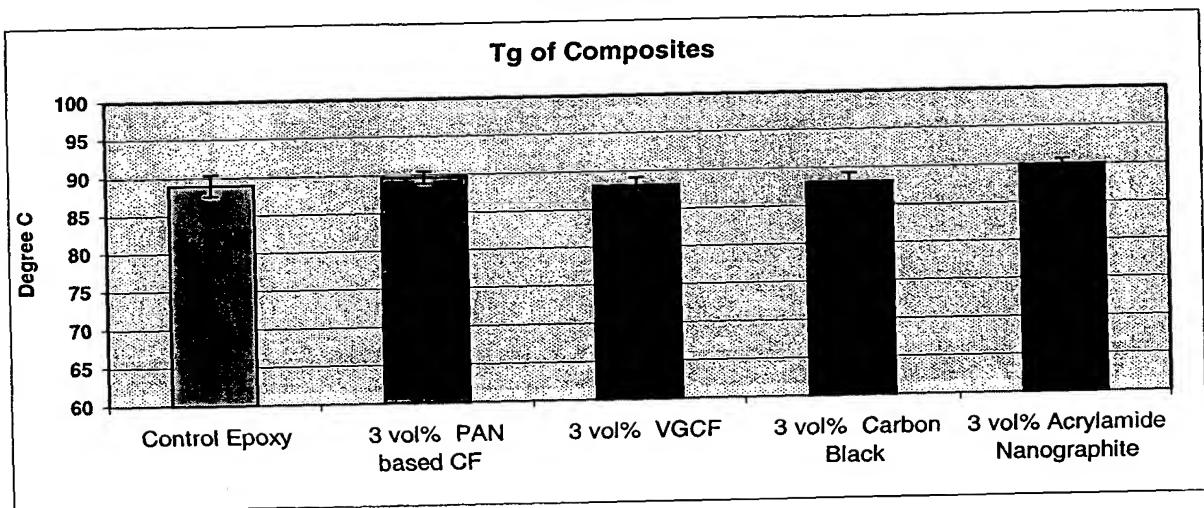


FIGURE 34

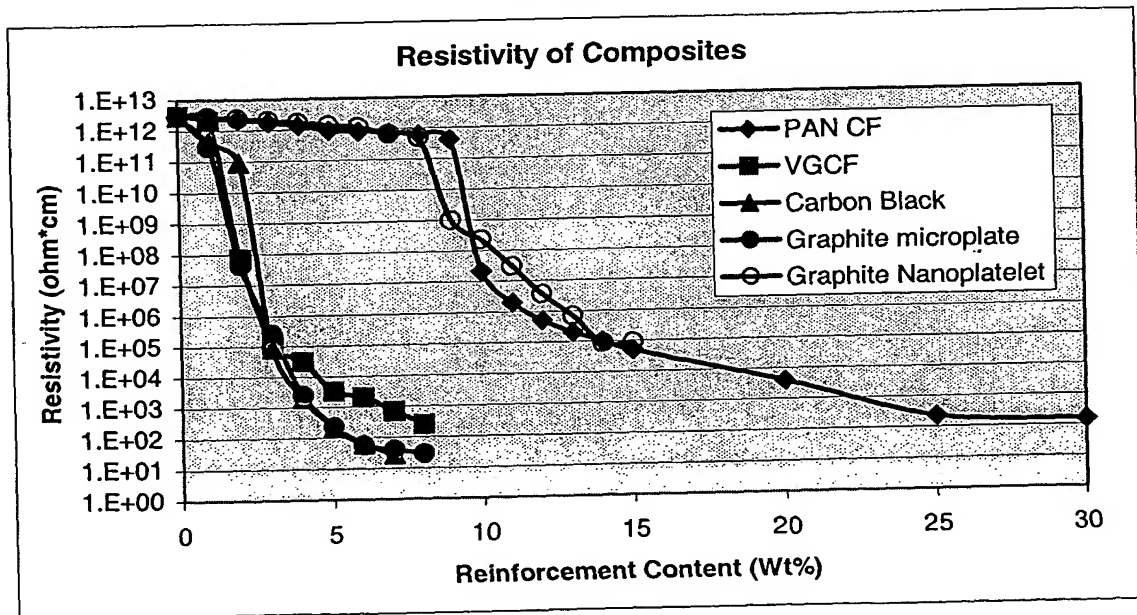


FIGURE 35

Resistivity of Composites Comparison to Other Carbon Materials

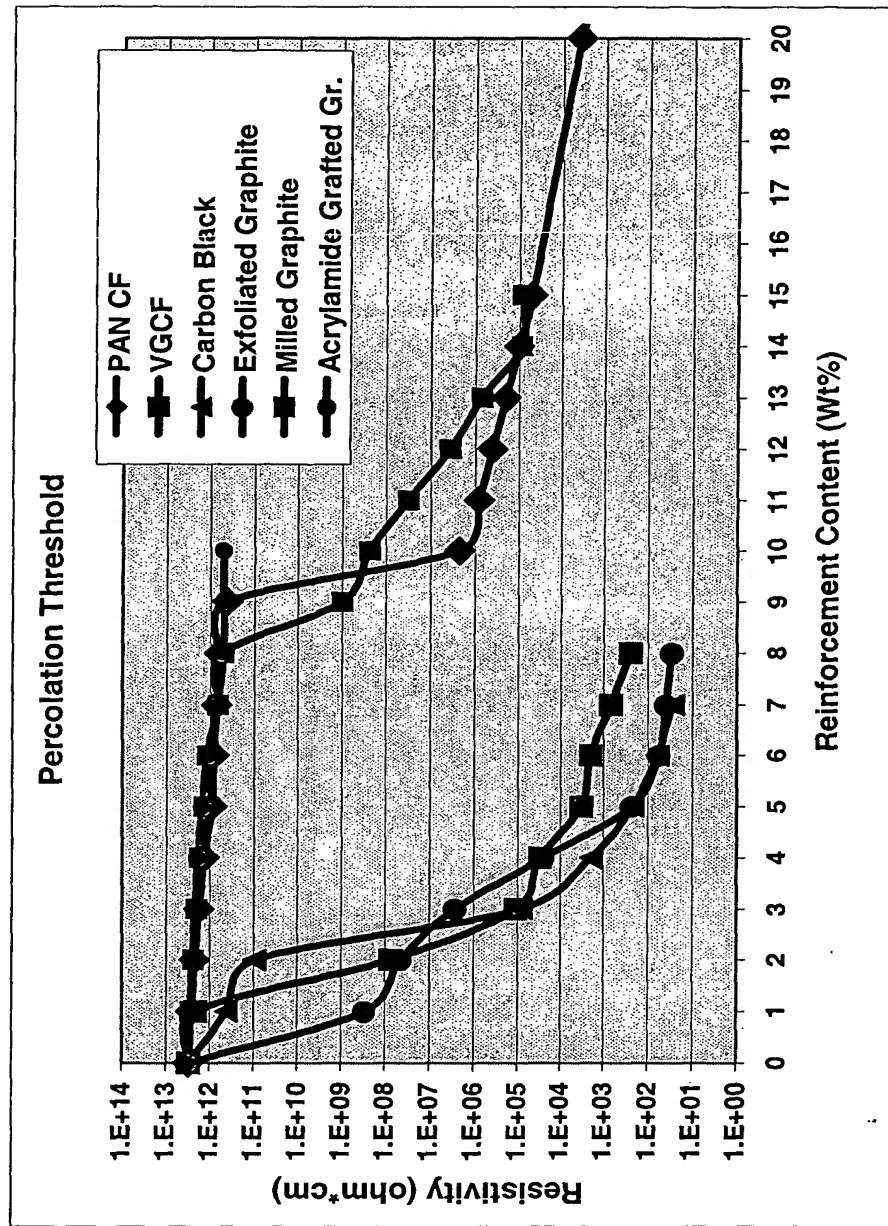


FIGURE 36

Impact Strength of Composites

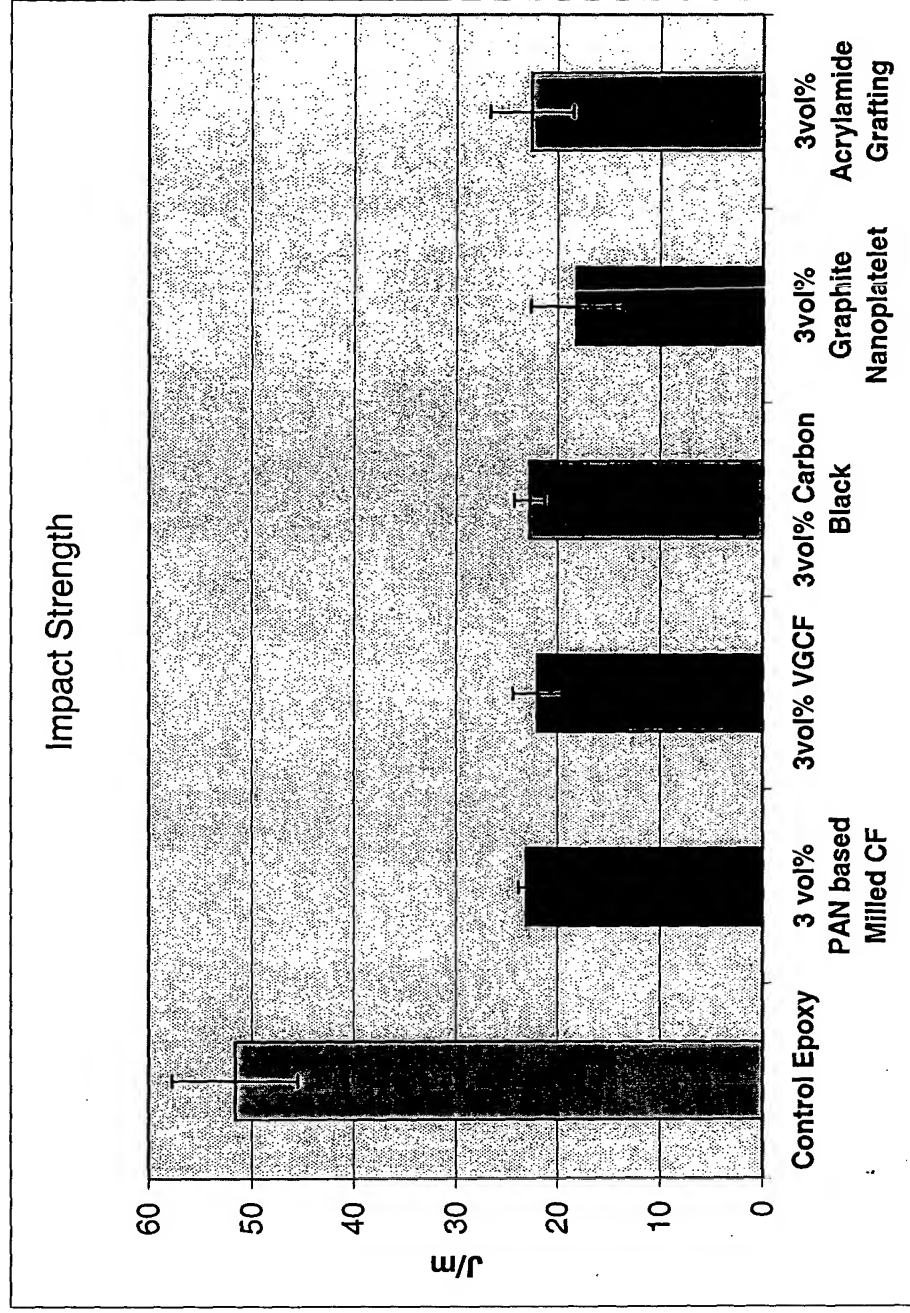


FIGURE 37

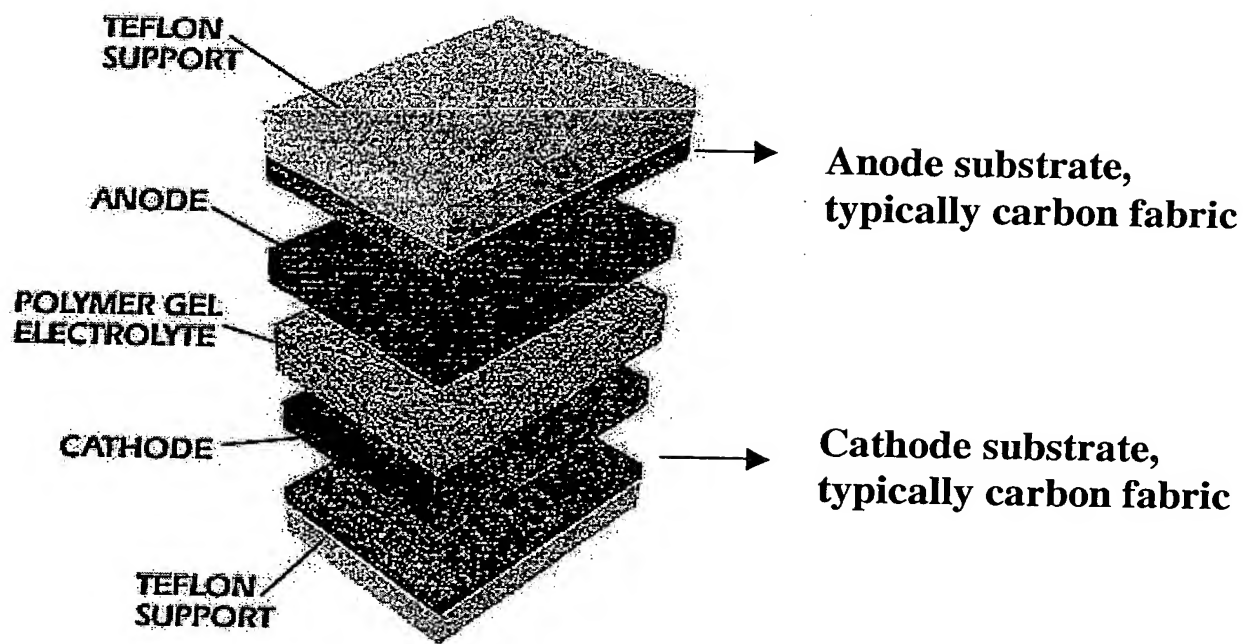


FIGURE 38

FIGURE 39

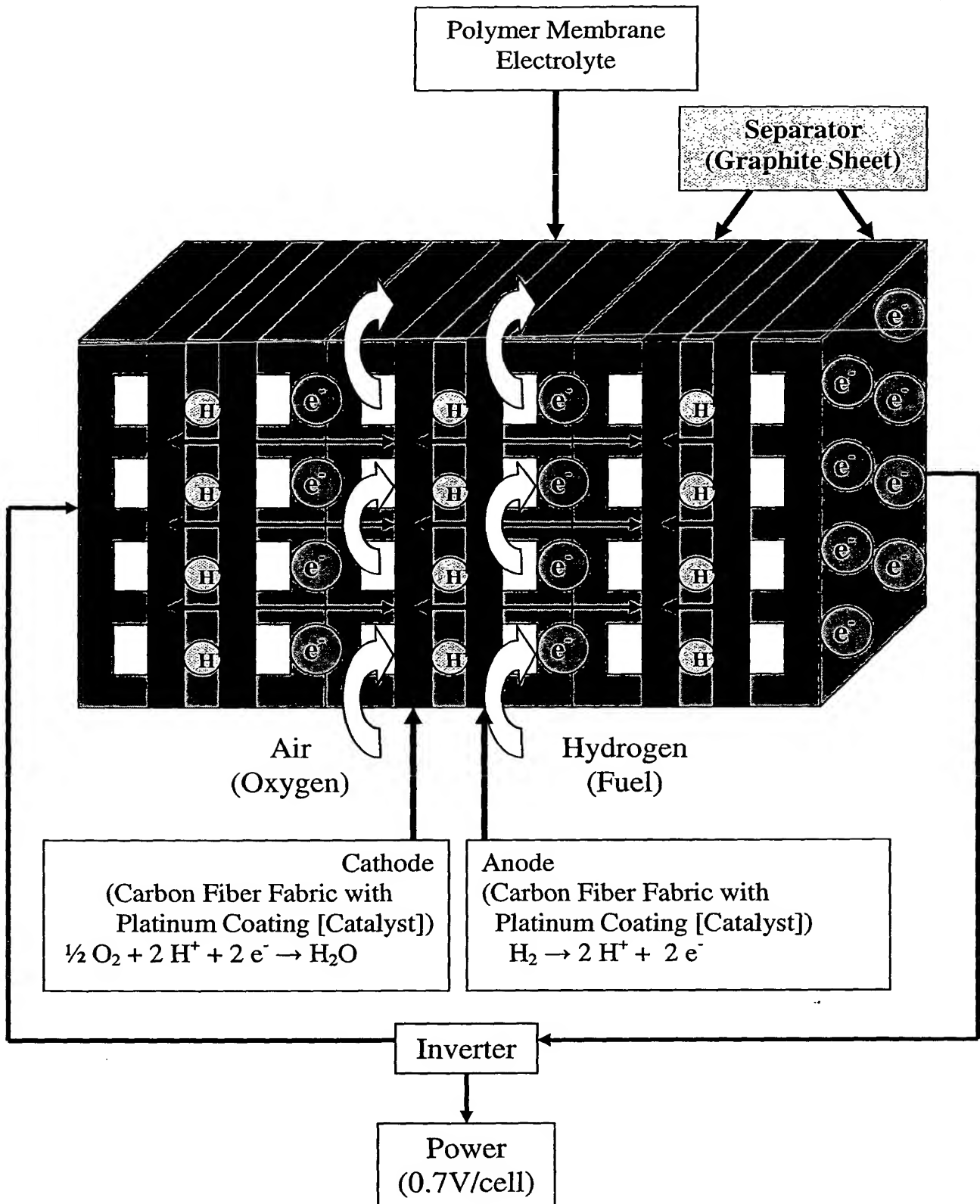


FIGURE 40

